

DRAFT

RECORD OF DECISION DECLARATION

Site Name and Location

Rocky Flats Plant Operable Unit 16: Low Priority Sites  
Golden, Jefferson County, Colorado

Statement of Basis and Purpose

This decision document presents the selected remedial action for Rocky Flats Plant Operable Unit (OU) 16: Low Priority Sites, located near Golden, Colorado. The selected remedial action which was chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by Superfund Amendments and Reauthorization Act of 1986 (SARA), the Colorado Hazardous Waste Act (CHWA) and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). OU 16 was investigated and a final No Further Action Justification Document (NFAJD) was approved in compliance with the Federal Facility Agreement and Consent Order signed by the U.S. Department of Energy (DOE), the State of Colorado (State) and the U.S. Environmental Protection Agency (EPA) on January 22, 1991.

Description of the Selected Remedy: No Action

The decision for a "No Action" remedy for Individual Hazardous Substance Sites (IHSSs) 185, 192, 193, 194 and 195 of OU 16: Low Priority Sites, was based upon the NCP which provides for the selection of a No Action alternative when a site or OU is already in a protective state. The Risk Assessment Analysis performed in the Final "No Further Action Justification" Document determined that these IHSSs are currently in a protective state and present no unacceptable risk to human health and the environment.

Declaration Statement

DOE has determined that no remedial action is necessary to be protective of human health and environment at Rocky Flats Plant Operable Unit 16: Low Priority Sites. Therefore, OU 16 now qualifies for inclusion in the "sites awaiting deletion" subcategory of the Construction Completion category of the National Priorities List. The DOE, the State and the EPA each and independently, concur with the selected remedy. This decision is based on the administrative record for OU 16.

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Mark N. Silverman, Manager  
U.S. Department of Energy, Rocky Flats Office

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date

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William P. Yellowtail  
Regional Administrator, Region VIII  
U.S. Environmental Protection Agency

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date

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Dr. Patricia A. Nolan, MD, MPH  
Director, Colorado Department of Health

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date

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## DECISION SUMMARY

A remedy of "No Action" was selected for Rocky Flats Plant OU 16: Low Priority Sites Individual Hazardous Substance Sites (IHSSs) numbered 185, 192, 193, 194 and 195. The risks associated with these IHSSs were assessed using conceptual model analyses. These conceptual model analyses demonstrated that exposure pathways are not complete for IHSSs 185, 192, 193, 194 and 195, because past response actions and/or natural attenuation processes eliminated the source or exposure pathways. Therefore, these IHSSs currently present no unacceptable risk to human health and the environment.

### Site Name, Location, and Description

Rocky Flats Plant (RFP) is located north of the City of Golden in northern Jefferson County, Colorado. A copy of a site location map is attached (Figure 1). Most RFP structures and OU 16 IHSSs are located within the industrialized area of RFP, which occupies approximately 400 acres. RFP is surrounded by a buffer zone of approximately 6,150 acres. IHSS 195 is located within the buffer zone (Figure 2).

RFP is located along the eastern edge of the southern Rocky Mountain region, immediately east of the Colorado Front Range. The plant site is located on a broad, eastward-sloping pediment that is capped by alluvial deposits of Quaternary age (Rocky Flats Alluvium). The pediment surface has a fan-like form, with its apex and distal margins approximately two (2) miles west of RFP. The tops of alluvial-covered pediments are nearly flat but slope eastward at 50 to 200 feet per mile (EG&G, 1992). At RFP, the pediment surface is dissected by a series of east-northeast trending stream-cut valleys. The bases of the valleys containing Rock Creek, North and South Walnut Creeks, and Woman Creek lie 50 to 200 feet below the elevation of the older pediment surface. These valleys incise into the bedrock underlying alluvial deposits, but most bedrock is concealed beneath colluvial material accumulated along the gentle valley slopes.

Rock Creek, North and South Walnut Creeks and Woman Creek are intermittent streams that flow generally from west to east draining RFP. Retention ponds are located in each of the creeks downstream of the main plant site. Rock Creek surface water flows northeast to the Rock Creek confluence with Coal Creek. Surface water within North and South Walnut Creeks, which is not retained within retention ponds used for spill control, flows to Great Western Reservoir. Surface water within Woman Creek, which is not diverted to Mower Reservoir, flows to Standley Lake.

The population, economics, and land use of areas surrounding RFP are described within a 1989 Rocky Flats vicinity demographics report prepared by DOE (U.S. DOE, 1991b). Land use within 0 to 10 miles of RFP has been divided within the demographics report into

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residential, commercial, industrial, parks and open space, agricultural and vacant, and institutional classifications. Most residential use within 5 miles of RFP is immediately northeast, east, and southeast of RFP. Commercial development is concentrated near residential developments north and southwest of Standley Lake and around Jefferson County Airport, located approximately 3 miles northeast of RFP. Industrial land use within 5 miles of the plant is limited to quarrying and mining operations. Natural resources associated with the quarrying and mining activities include gravel and coal, respectively. Open-space lands are located northeast of RFP near the City of Broomfield and in small parcels adjoining major drainages and small neighborhood parks in the cities of Westminster and Arvada. The west, north, and east sides of Standley Lake are surrounded by open space. Irrigated and nonirrigated croplands, producing primarily wheat and barley, are located north and northeast of RFP near the cities of Broomfield, Lafayette, Louisville, and Boulder, and in scattered parcels adjacent to the eastern boundary of the plant. Several horse operations and small hay fields are located south of RFP. The demographic report characterizes much of the vacant land adjacent to RFP as rangeland.

## Site History and Enforcement Activities

RFP is a government-owned, contractor-operated facility, which is part of the nationwide Nuclear Weapons Complex. The plant was operated for the U.S. Atomic Energy Commission (AEC) from its inception during 1951 until the AEC was dissolved during 1975. At that time, responsibility for the RFP was assigned to the Energy Research and Development Administration (ERDA), which was succeeded by the DOE during 1977. Previous operations at RFP consisted of fabrication of nuclear weapons components from plutonium, uranium, and nonradioactive metals (e.g., stainless steel and beryllium).

Various studies have been conducted at RFP to characterize environmental media and to assess the extent of radiological and chemical contaminant releases to the environment. The investigations performed prior to 1986 were summarized by Rockwell International (1986a). During 1986, two investigations were completed at the plant. The first was the DOE Comprehensive Environmental Assessment and Response Program (CEARP) Phase I Installation Assessment (U.S. DOE, 1986). A number of sites that could potentially have adverse impacts on the environment were identified and designated as Solid Waste Management Units (SWMUs) within the CEARP for RFP. The second investigation involved a hydrogeologic and hydrochemical characterization of RFP (Rockwell International, 1986d).

On January 22, 1991 a Federal Facility Agreement and Consent Order (i.e., the Interagency Agreement) was signed by the DOE, EPA Region VIII and State of Colorado (the State). Within the IAG the SWMUs were changed to IHSSs and seven IHSS were assigned OU 16. In addition, the Interagency Agreement (IAG) provided guidance and

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direction on investigating OU 16 IHSSs and preparation of the draft and final NFAJDs. Based on the NFAJD prepared for OU 16 in accordance with the IAG, "no action" is appropriate for five (5) of the original seven (7) OU 16 IHSSs. Based on the approved NFAJD for OU 16, further investigation is necessary for IHSS 196 and IHSS 197. IHSS 196 and IHSS 197 were transferred out of OU 16 and into OU 5 and OU 13, respectively for further investigation.

The IAG was incorporated in its entirety within the Colorado Hazardous Waste Permit (CHWP) for RFP. Upon signature of the ROD by the DOE, the EPA and the State, the State shall modify the CHWP for RFP to incorporate the signed ROD for OU 16.

## Highlights of Community Participation

A public comment period was held concurrently for both the Proposed Plan and Draft Modification of Colorado Hazardous Waste Permit for Rocky Flats Plant Operable Unit 16: Low Priority Sites. The public comment period was held from November 8, 1993 to January 7, 1994 and was extended to February 8, 1994 in response to written public request. A public hearing was conducted on December 8, 1994, during which public comments and questions regarding the Proposed Plan for OU 16 were recorded and have subsequently been responded to within this ROD.

## Scope and Role of Operable Unit within Site Strategy

The five (5) IHSSs comprising OU 16 include: IHSS 185 - Solvent Spill; IHSS 192 - Antifreeze Discharge; IHSS 193 - Steam Condensate Leak - 400 Area; IHSS 194 Steam Condensate Leak - 700 Area; and IHSS 195 - Nickel Carbonyl Disposal. All of the IHSSs are located within the industrial area of RFP, except for IHSS 195 which is located approximately 2000 feet north of the industrialized area of RFP (Figure 2). OU 16 IHSSs were grouped together as "low priority sites" within the IAG because of the likelihood that previous actions or natural environmental processes eliminated the need for remedial action. The scope defined for OU 16 IHSSs within Table 5 of the IAG includes submittal of documentation and data required to justify whether further action is required for the IHSSs within OU 16. The NFAJD was completed and submitted in accordance with the requirements specified within Table 5 and Table 6 of the IAG.

## Site Characteristics

The uppermost water bearing unit at RFP is unconfined and consists of surficial deposits (Rocky Flats Alluvium, colluvium, valley-fill alluvium, fill material and disturbed ground), weathered bedrock units, and subcrops of the Arapahoe and Laramie Formations. The bedrock underlying RFP can be considered an aquitard. The direction of ground-water flow within the surficial deposits is generally from west to east beneath OU 16 IHSSs. Recharge to the surficial water-bearing unit occurs primarily from precipitation. Discharge from the surficial water-bearing unit

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occurs primarily at minor seeps. Seeps occur in colluvial deposits that cover the contact between the alluvium and bedrock along the edges of the valleys. Discharge also occurs via seepage into other geologic formations and through evapotranspiration.

Based on the conceptual model presented within the NFAJD for OU 16, no sources and/or pathways for contamination from OU 16 IHSSs exist. A more detailed discussion of each individual IHSS is included within the "Summary of Site Risks" presented below.

## Summary of Site Risks

The risks associated with the OU 16 IHSSs and the need for no further action were assessed using a conceptual model to evaluate the exposure pathways by which contaminants could reach humans. The model is based on the physical setting, the operation, and the nature of hazardous substances. The model describes the sources and types of contamination, environmental media (soil, ground water, etc.), contamination pathways, and the presence of humans (or other living organisms that may be affected). Past cleanup actions and natural processes that have affected the hazardous substances are described. A detailed discussion is presented in Section 3 of the Final "No Further Action Justification" Document.

An exposure pathway must have four parts to be complete: 1) A source of contamination; 2) A release of the contamination; 3) A route for the contamination to reach a human; and 4) A human (or other living organism) population that can be affected. If the exposure pathway is not complete there is no unacceptable risk to humans or the environment, and no further action is appropriate.

A brief discussion of the conceptual model analysis performed for each IHSS is presented as follows:

**IHSS 185, Solvent Spill.** The vapor pressure of TCA at 20°C is 13.2kPa (99 mm Hg: Mackay and Shui, 1981), and volatilization is rapid (U.S. EPA, 1979). Also TCA was not detected in any of the eight ground-water samples collected between November 1989 and April 1992 from monitoring well P218089. The immediate clean up action of the TCA minimized or potentially eliminated the source of TCA contamination. Because the spill occurred on a paved area and the cleanup response action of the source was immediate, the wind dispersion and infiltration transport pathways are eliminated.

**IHSS 192, Antifreeze Discharge.** The concentration of ethylene glycol has been diluted below the detection limits by the 5,000 gallons of water that was flushed through the system immediately after the release and by surface water runoff for the past 12 years. Also, a degradation model of ethylene glycol showed less than 7 ppm (250,000 ppm in antifreeze) between 20 to 40 days after the contamination occurrence. Using this same reasoning, it is predicted that the ethylene glycol related to the 1979 spill is completely degraded by this time.

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**IHSS 193, Steam Condensate Leak - 400 Area.** The area where the leak occurred was paved, eliminating the infiltration and wind dispersion pathways. The concentration of amines in the steam condensate (0.135 mg/L) was approximately 1 1/2 percent of the permissible exposure limit (PEL) of 10 mg/L. Also, the concentration of amines has been diluted by rainfall over 12 years since the spill occurred. Amines could not be detected; no source of contamination is present.

**IHSS 194, Steam Condensate Leak - 700 Area.** The condensate had a tritium activity of approximately 1,000 pCi/L which is significantly lower than the EPA set public drinking water standard of 20,000 pCi/L. Also, the released tritium has undergone one half-life decay since the occurrence of the release. This predicts a present-day maximum tritium activity of 500 pCi/L. This value is within the range of background activities reported for tritium in surface waters at RFP. Tritium associated with this IHSS does not represent an existing source of contamination.

**IHSS 195, Nickel Carbonyl Disposal.** Nickel carbonyl is highly volatile and readily decomposes in the presence of oxygen forming nickel oxide. Nickel oxide is highly insoluble in ground water. For every gram (0.002 pound) of nickel oxide in contact with typical ground water, approximately 10 micrograms (ug) of nickel per liter of water is transferred to solution. EPA's reference dose for nickel in drinking water is 100 ug/L (U.S. EPA, 1990). Wind dispersion disseminated nickel oxide particles, which would not be detected at concentrations exceeding background.

These conceptual model analyses demonstrated that exposure pathways are not complete for IHSSs 185, 192, 193, 194 and 195, because past response actions and/or natural attenuation processes eliminated the source or exposure pathways. Therefore, these hazardous sites currently present no unacceptable risk to human health and the environment.

## Explanation of Significant Changes

No changes in the selected remedy have been made since release of the Proposed Plan and Draft Modification of Colorado Hazardous Waste Permit for Rocky Flats Plant Operable Unit 16: Low Priority Sites.

## RESPONSIVENESS SUMMARY

### PROPOSED PLAN/DRAFT MODIFICATION OF COLORADO HAZARDOUS WASTE PERMIT FOR ROCKY FLATS PLANT OPERABLE UNIT 16: LOW PRIORITY SITES

**Ronald Harlan, Area Citizen:**

Question 1:

How was the exposure pathway broken for each of the five sites?

Response Question 1:

The exposure pathway was broken at the source for IHSS 185 since the spill (i.e., four gallons of the solvent 1,1,1 Trichloroethane (TCA)) occurred onto a paved area, the volatilization rate of TCA is inherently high, and a cleanup response action was initiated at the time of the release.

The exposure pathway was broken at the source for IHSS 192 because the antifreeze discharged was diluted and evaluation of its degradation indicated that no ethylene glycol could be detected at this time.

The exposure pathway was broken at the source for IHSS 193 because the steam condensate release occurred on a paved area, the concentration of amines was relatively low within the steam condensate, precipitation diluted the amines and amines could not be detected at IHSS 193.

The exposure pathway was broken at the source for IHSS 194 because the tritium activity of 1000 picocuries per liter (pCi/L) within the steam condensate released was significantly lower than U.S. EPA set drinking water standard for tritium of 20,000 pCi/L. Also the activity of tritium was within the background range for surface water at RFP. In addition, based on the 12.26 year half-life of tritium, less than 500 pCi/l of tritium is estimated to be present today.

The exposure pathway was broken at the pathway for IHSS 195 since nickel carbonyl is highly volatile and readily decomposes in the presence of oxygen to form nickel oxide. The concentration of nickel oxide on the ground surface if ejected from the dry well would not be detected above background. Nickel oxide is highly insoluble in ground water and a viable transport pathway does not exist for nickel oxide from the dry well.

Question 2:

What metals, (within IHSS 197), were there that are of concern?

Response Question 2:

Scrap metal components, primarily from the original plant construction program, were buried within IHSS 197 trenches. In addition, unusable scrap metal such as aluminum and steel associated with the Property Utilization and Disposal yards was disposed of within the trenches. There is a slight possibility that transformers containing polychlorinated biphenyls were disposed within the IHSS 197 trenches also. Buried material was removed from the trenches during 1981. The unearthed material consisted of moist, but not oily, scrap metal such as machine turnings, rings, shapes, overlays, and other metal parts. Transformers or related material were not present in the material excavated from the trenches. Monitoring of materials using a Field Instrument for Detection of Low Energy Radiation (FIDLER) indicated no detectable radioactivity.

Question 3:

So what needs investigating--you don't know what was put there, (within IHSS 197), so you?

Response Question 3:

The response to this question provided during the Public Hearing conducted on December 8, 1993, was misstated. Further investigation is warranted at IHSS 197 since the extent of excavation and removal of material from the trenches during 1981 is unknown. Therefore, buried material may still be present within the trenches at IHSS 197 which could be a source of contamination. Since contamination may still be present, exposure pathways may also exist. Additional investigative work must be conducted at IHSS 197.

Question 4:

Some day you'll get around to finding out what's there, (within IHSS 197)?

Response Question 4:

Additional investigative work at IHSS 197 is being done as part of the Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI) for Operable Unit (OU) 13. Radiation surveys within IHSS 197 have already been completed as part of the RFI/RI. IHSS 197 was transferred to OU 13 for two reasons: 1) technically the RFI/RI for OU 13 is adequate for addressing potential contamination associated with



IHSS 197; and 2) administratively the transfer of IHSS 197 from OU 16 to OU 13 allows the IHSSs remaining in OU 16 to be closed per the Interagency Agreement (IAG).

Question 11:

--I just question whether a thousand pico-curies per liter, did you say, is a natural background. There is tritium produced in nature, but this sounds a little high.

That's roughly 2,200 disintegrations permitted per liter, and I'm kind of surprised at that.

Comment 4:

Well, I think milligrams of tritium would be many curies.

Question 12:

So five pico-curies per liter, (of tritium is considered background)?

Question 13

Okay. Of tritium, (500 pCi/l is considered background), in groundwater?

Question 14:

I kind of wonder how it, (1000 pCi/l tritium within the steam condensate), got to that high concentration.

Comment 5:

In steam now--I don't know exactly how steam counts work. But let's say that water was being recirculated for many years. Tritium--well, water containing tritium is a little heavier than the average water molecule, and maybe over 20 years it would concentrate. I don't know.

Of course, over 20 years, more than half of it should decay, too, so--

**General Response to IHSS 194 questions 11, 12, 13 and 14, and comments 4 and 5:**

During the Public Hearing there was confusion regarding IHSS 194, the background activity of tritium, the units in which the activity of tritium is presented, etc. A general response approach to IHSS 194 questions and comments was agreed upon by EPA, DOE and CDH in order to ensure that the public's questions and comments regarding IHSS 194 are addressed clearly and that public hearing misstatements are corrected. A general response to IHSS 194 questions 11, 12, 13 and 14, and comments 4 and 5 is presented below.

Within the Background Geochemical Characterization Report for Rocky Flats Plant (EG&G, 1990) a maximum background activity for tritium during 1989 is reported as 980 picocuries per liter (pCi/l) within Rocky Flats Plant (RFP) surface water. Other values of background tritium activity provided in response to Public comments and/or questions during the public hearing held on December 8, 1994, were misstated. The activity of tritium within samples of IHSS 194 steam condensate released during 1979 was approximately 1000 pCi/l which does not differ statistically from the reported range of background values (EG&G, 1990) measured during 1989. Additional information regarding background activities of tritium, and sampling that has been conducted, is stated in the No Further Action Justification Document (NFAJD) for OU 16. The NFAJD is available for the public at the various RFP information repositories located in the area.

Tritium decays rapidly and has a half-life of 12.26 years. Based on the half-life of tritium, the present day activity of the tritium released during 1979 would be less than 500 pCi/l. The EPA has set a public drinking water standard of 20,000 pCi/l as a maximum for tritium. Therefore, the tritium activity present is at very low concentration and well below standards.

Tritium is usually presented and discussed in units of picocuries (pCi) which is a measurement of activity. Picocuries per liter is an expression of activity concentration. An activity of 27 pCi is equivalent to one (1) disintegration per second (dps). Therefore, steam condensate with an activity concentration of 1000 pCi/l is equivalent to approximately 37 dps per liter (dps/l).

Tritium is both a naturally occurring and man-made isotope of hydrogen and behaves identically to hydrogen when combining with oxygen to form water molecules. As stated above, tritium is usually discussed in terms of an activity versus a weight (i.e., pCi versus milligrams, respectively). One (1) milligram (mg) of steam condensate with an activity of 1000 pCi/l would have an activity equivalent to approximately  $10^{-15}$  curies (Ci). A conversion table for various units used within this general response is provided below.

Tritium behaves identically to hydrogen when combining with oxygen to form water molecules. Tritium is not "dissolved" within water, but is part of the water molecule itself. As a result, tritium is readily transported and highly mobile as a component of surface water, ground water, body fluids, etc. Tritium will not concentrate within water (i.e., steam condensate) because of its mobility as part of and the affinity that tritiated water molecules have for water.

#### CONVERSION TABLE

$$1 \text{ dps} = 27 \text{ pCi}$$

$$1000 \text{ pCi/l} = 37 \text{ dps/l}$$

$$1 \text{ pCi} = 10^{-12} \text{ Ci}$$

$$1 \text{ mg H}_2\text{O @ } 1000 \text{ pCi/l} = 10^{-15} \text{ Ci} = 0.001 \text{ pCi}$$

Ken Korkia, Technical Assistant for the Rocky Flats  
Cleanup Commission:

Question 5:

Does that mean that under the current situation they, (the four parts of the exposure pathway), have to be complete, or does this take in the hypothetical future uses that could lead to a population that may some day be exposed?

And specifically, I have a thought in mind that if you have an underground or groundwater contamination, and you know that there's definite levels of contamination, but you know that no one is currently using that source of groundwater, would that be a case, then, where you wouldn't have to clean up that source groundwater?

Response Question 5:

Reasonable hypothetical future uses that could lead to a population that may some day be exposed were considered. Specifically, the future use of an aquifer would have to be considered and contamination addressed appropriately to protect

the public and the environment. Per the EPA Risk Assessment Guidance for Superfund (RAGS) the exposure assessment included reasonable maximum estimates of exposure for both current and future land-use assumptions. Current exposure estimates were used to determine whether a threat exists based on existing exposure conditions at the site. Future exposure estimates are used to provide decision-makers with an understanding of the potential future exposures and threats and include a qualitative estimate of the likelihood of such exposure occurring.

Question 6:

-- What's the source of tritium in that, (IHSS 194), steam condensate?

Response Question 6:

The source of the tritium within the steam condensate is not known. However, the current maximum of 500 pCi/l within the steam condensate is within the reported range of background values (EG&G, 1990) for RFP and is significantly less than the EPA set public drinking water standard of 20,000 pCi/l for tritium. Please refer to the general response provided for questions 11, 12, 13 and 14, and comments 4 and 5 presented above.

Question 7:

So, but is this, (1000 pCi/l tritium in steam condensate), higher than normal?

Response Question 7:

Please refer to the general response provided for questions 11, 12, 13 and 14, and comments 4 and 5 presented above.

Question 8:

--is this just naturally occurring in all the steam that's at Rocky Flats that you would find the tritium?

Response Question 8:

Please refer to the general response provided for questions 11, 12, 13 and 14, and comments 4 and 5 presented above.

Question 9:

Because my concern is, then, that every place--I'm sure you've had other steam leaks over the past with all the miles of pipe that you must have out there, and so that was this only one example that was pulled up, or why are other areas where there were leaks aren't being considered for this same contamination?

Response Question 9:

When the IAG was negotiated the only steam condensate leak identified as a potential concern with regard to tritium was the IHSS 194 release. However, it was agreed by EPA, CDH and DOE that a mechanism to address past and future releases needed to be in place within the IAG. The mechanism that was agreed upon is the Historical Release Report (HRR). The HRR is updated every three months to include newly identified or suspected releases for which DOE has notified EPA and the State during the previous three months. The HRR is available to the public at the public information repositories for Rocky Flats Plant.

Question 10:

If a steam leak were to occur today, would it be standard procedure to do a radionuclide specific testing on that to see if there was tritium, plutonium, uranium in the steam?

Response Question 10:

All detected releases at RFP are investigated. Steam condensate which is accidentally released within an IHSS is sampled, and the appropriate response is made. Standard Operating Procedures (SOPs) for reporting and mitigating releases are in place at Rocky Flats Plant in compliance with RCRA and the Colorado Hazardous Waste Permit for RFP. However, steam condensate is not considered a hazardous waste. Tritium, plutonium and uranium are not automatically included with regard to steam condensate leak sampling unless a potential for tritium, plutonium and uranium contamination exists. The steam system(s) at RFP where a potential for tritium, plutonium and uranium contamination exists are designed to maintain a "safety envelope" to prevent potentially contaminated steam from escaping. A safety envelope is created by maintaining relatively greater steam pressures outside areas where a potential for tritium, plutonium and uranium contamination exists.

Comment 1:

Well, I hope there's a little more information in the full document about tritium.

Response Comment 1

Additional information regarding tritium is available within the No Further Action Justification Document for OU 16 which is available for the Public at the RFP Information Repositories.

Comment 2:

And just a closing comment, I guess that I know this is our first operable unit where we've really gotten this far down where there actually have been decisions made, and I guess it's wishful on my part, but I hope that all the documents will be as easy to read and to comprehend, and that the decisions will be as easy to make. But I seriously doubt that will be the case, but we can only hope.

Response Comment 2:

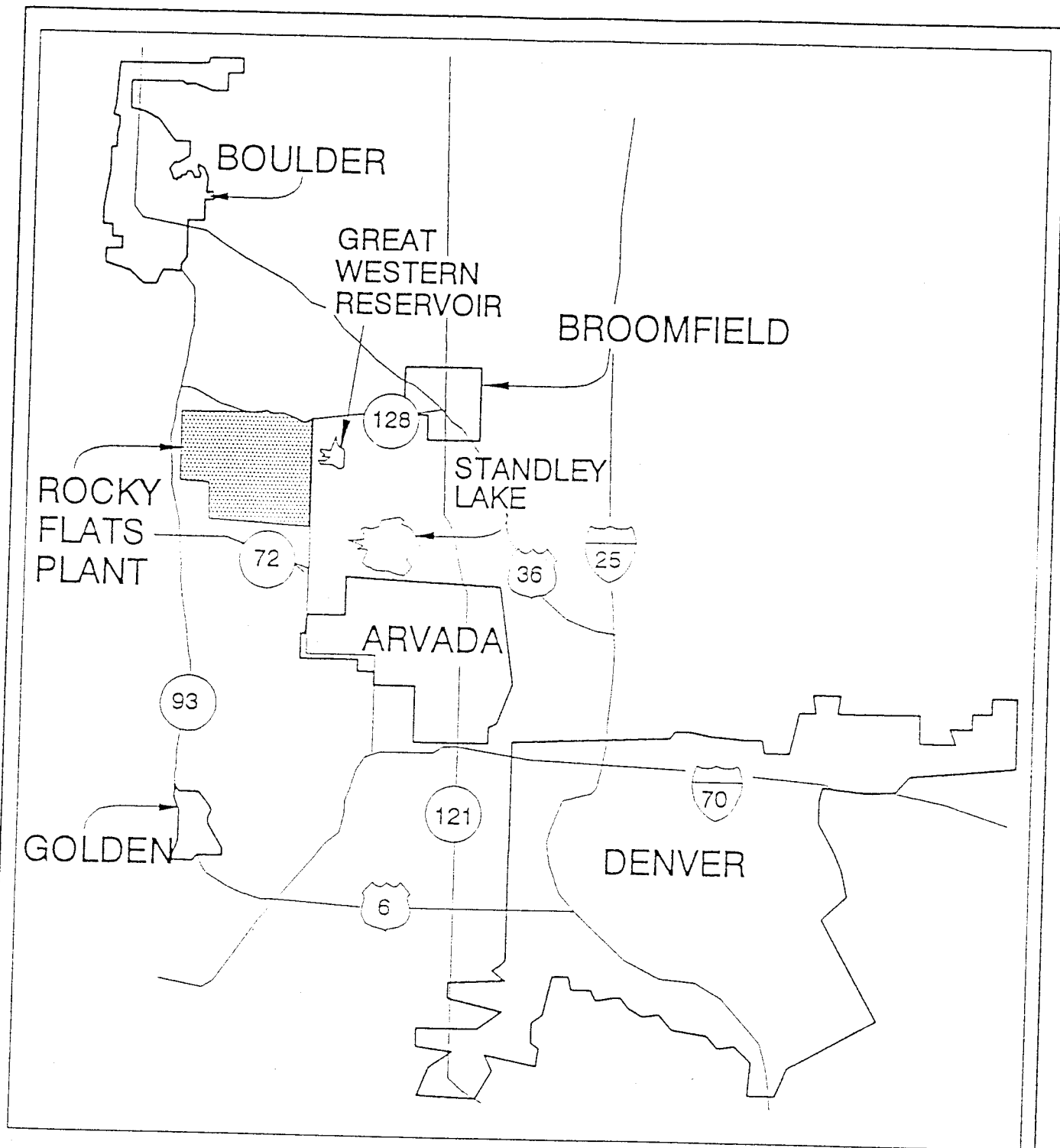
The DOE acknowledges the support for the format and content of the Proposed Plan/Draft Modification of the Colorado Hazardous Waste Permit for Rocky Flats Plant Operable Unit 16: Low Priority Sites.

Comment 3:

I commend the authors of this, especially the inclusion of the glossary and just the explanation of everything was easy to comprehend. Thanks.

Response Comment 3:

The DOE acknowledges the support for the format and content of the Proposed Plan/Draft Modification of the Colorado Hazardous Waste Permit for Rocky Flats Plant Operable Unit 16: Low Priority Sites.



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APPROXIMATE SCALE: 1" = 5 MILES

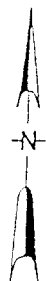








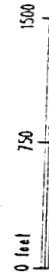
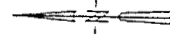
FIGURE 1  
SITE LOCATION MAP

U.S. Department of Energy  
Rocky Flats Plant

-  Paved roads
-  Fences
-  Streams, ditches, and other drainage features
-  Ponds/lakes
-  Individual hazardous substance sites (IHSS)
-  Buildings or structures

SOURCE OF DATA:

Individual Hazardous Substance Sites - Radiological Feature Report



Environmental Restoration  
Technical Support Document

Operable Unit 16  
Low Priority Sites

Figure 2

DATE: 3-17-84

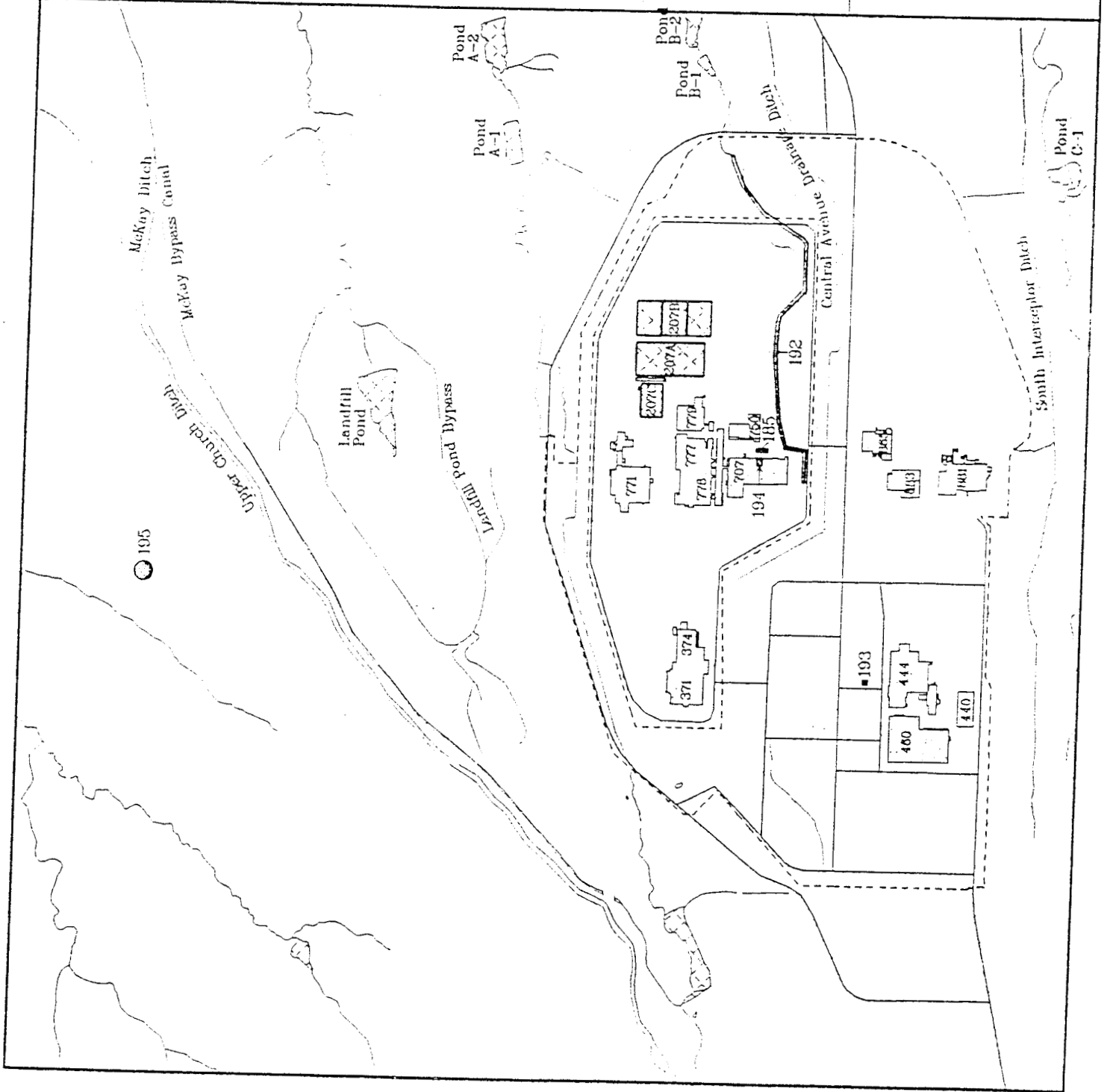




Figure 3

ROAD CLASSIFICATION

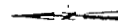
- Heavy-duty
- Medium-duty
- Light-duty
- Unimproved dirt

Rocky Flats Plant boundary

Streams, ditches, and other drainage features

Ponds and lakes

Buildings and other structures



Scale: 1 inch = 1 mile  
1 inch = 1/2 mile

Rocky Flats Plant  
Golden, Colorado 80402 0164

Prepared by:  
EDG/ROCKY FLATS

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